means, regardless of a selecting operation by said zone selecting means.

REMARKS

Applicants respectfully request reconsideration of this application in view of the foregoing amendments and the following remarks.

Claim Status

Claims 1-16 are pending. Claims 1-16 stand rejected. Claims 1, 3, 6 and 9 are independent in form.

Claim 1 has been rejected under 35 U.S.C. §102(b) as allegedly anticipated by Mimura et al. (USP 5,280,359)("Mimura"). The remaining claims have been rejected under 35 U.S.C. §103 as being unpatentable over Mimura in combination with other references, all of which were previously cited, as follows: claim 2 as being unpatentable over Mimura in view of Munson (USP 5,684,814); claims 3-5 as being unpatentable over Mimura in view of Iwasaki (USP 5,461,452); claims 6-8 as being unpatentable over Mimura in view of Iwasaki and further in view of Shimuzu (USP 5,400,074); claims 9-15 as being unpatentable over Mimura in view of Iwasaki and further in view of Faltermeier (USP 5,579,156); and claim 16 as being unpatentable over Mimura in view of Iwasaki and Faltermeier and further in view of Arai et al. (USP 5,570,156).

While Applicants believe that the rejected claims are in condition for allowance without further amendment, Applicants none-the-less herein amend independent claims 1, 3, 6 and 9 to clarify features of the claimed invention and to expedite prosecution and request

reconsideration in view of the following.

The Examiner alleges that Mimura discloses all the elements of claim 1 including the "exposure detection means for detecting an exposure condition on the basis of an image signal in a selected zone;" and "exposure control means for controlling exposure based upon the detected exposure condition." (See ¶4 b, page 3 of the Office Action.) The Examiner cites to the microcomputer 11 of Mimura and col. 2, line 55 to col. 3, line 20 as disclosing these limitations. The cited text reads as follows (bold emphasis added as will be explained *infra*):

> Then, the microcomputer 11 controls the display circuit 6 so that the signal mixing section 7 mixes a 25-dividing line signal indicative of dividing lines into the subject image signal which is now being displayed. The D/A converter section 8 converts the signal thus formed into the corresponding analog signal to be outputted to the output terminal 9. Thus, the image supplied from the CCD 4 and the dividing line signal from the display circuit 6 are outputted in an interposing manner. As a result, which blocks of the photometric areas where the subject to be picked up is located can be known correctly. In this case, **the photometric area selecting switch 10 is operated so as to mask the blocks 21-2, 21-3, 21-7, 12-10 and 21-15 of the field of image 21**. Correspondingly, the microcomputer 11 **excludes** the signal for the blocks 21-2, 21-3, 21-7, 12-10 and 21-15 and **controls the lens drive circuit 2 on the basis of the signal for the remaining blocks**. The microcomputer 11 controls the display circuit 6 so that the blocks 21-2, 21-3, 21-7, 12-10 and 21-15 are "painted over". These blocks are painted over also at the output terminal 9. The blocks painted over and the dividing lines disappear after a predetermined time so that only the image from the CCD will be outputted at the output terminal 9.
>
> Once the photometric area is specified, the lens drive circuit 2 is **controlled on the basis of the signal for the blocks other than the blocks 21-2, 21-3, 21-7, 21-10 and 21-15**. Thus, the diaphragm of the ALC lens 1 will be operated to be more open than before. As a result, the amount of light for the blocks 21-13, 21-14, 21-18 and 21-19 is increased so that the image of the subject corresponding to these blocks can be seen brightly at the terminal 9.
>
> In this way, in accordance with the embodiment described

> above, by operating the photometric area selecting switch 10, any block of 25-divided blocks 21-1 to 21-25 on the field of image 21 can be easily specified as a **masking area**. Hence, the subject which is too dark to see because of backlight becomes to be seen by adjusting an optimum amount of light of the remaining photometric areas.

Mimura discloses an image pick-up device for use in a television camera including a diaphragm control optimizing light amount for a subject regardless of the position where the television camera is located.

In Mimura, a picked up image is divided into a plurality of blocks to be displayed as shown Fig. 2. Any particular block of the plurality of blocks, as selected by photometric area selecting switch 10, can be specified as a photometric area. Mimura thus allows a user to select an area of an image that is to be ***ignored*** in setting or adjusting the lens.

Once the photometric area is thus specified, the signal of the specified blocks is excluded (i.e., masked) and the amount of light for the subject is controlled, by adjusting the diaphragm of a lens, on the basis of signals of the remaining blocks. Thereby, the amount of light for the subject is optimized regardless of a position where the television camera is located.

That is, Mimura only performs exposure control to the subject based on the signals of the remaining blocks. In Mimura, the exposure control is continued by using the signals detected in every predetermined control frequency.

The present invention, on the other hand, as recited in claim 1 regarding the image sensing apparatus having image sensing means (3) senses a subject image formed on an image sensing plane and outputting an image signal corresponding to the subject. The invention as

recited in claim 1 is characterized as follows.

Initially, in a state that the image sensing means is sensing the subject image, a photographer selects any zone on the image sensing plane in which an optimum exposure control state of exposure is desired to be obtained by zone selecting means (21).

Exposure detection is then performed automatically for detecting an exposure condition on the basis of an image signal in a selected zone selected by the zone selecting means.

Next, an exposure control is performed automatically for controlling exposure based upon the detected exposure condition by the exposure control means (18c).

Memory means (18d) then stores control parameters of the exposure control means in responsive that an exposure control processing by the exposure control means is completed and an optimum exposure control state is obtained.

After that, the control means automatically controls, by using the control parameters stored in the memory means, the exposure control means to fix an exposure control state to the optimum exposure control state regardless of a selecting operation by the zone selecting means.

In this fashion, by the photographer's selection of a zone (subject) while the image sensing means is sensing the subject image, the optimum exposure control state of the selected zone will be fixed appropriately regardless of a selecting operation by the zone selecting means. That is, the optimum exposure control state is locked to the selected zone even if the photographer's visual axis (line-of-sight) gets out of the selected zone because the control parameters are stored in the memory means.

Accordingly, the image sensing apparatus recited in claim 1 enables more accurate optimum exposure control for the selected zone, even though it may be difficult for the photographer to accurately discern the state of exposure of the subject of the EVF or the LCD.

Note that, as argued in the previous response, support for the above described features, *inter alia*, may be found for example with respect to the first embodiment (line 4, page 26 to line 25, page 28 of the application).

It is Applicants' opinion that the teaching of Mimura is not and cannot be "exposure detection means for detecting an exposure condition on the basis of an image signal in a selected zone" and "exposure control means for controlling exposure based upon the detected exposure condition" as recited in claim 1. Applicants submit that Mimura does not disclose, teach or suggest at least the above-described features of the present invention. Mimura cannot store the operating parameters of a desired zone while camera 16 is sensing subject image. In fact, the teaching of Mimura of masking and ignoring the selected area is a teaching ***in direct contrast to the present invention*** where, e.g., exposure is controlled based on the image in the selected area.

Thus, Mimura is silent at least on:

1. storing control parameters in the memory means when an exposure control processing by the exposure control means is completed and an optimum exposure control state is obtained, and

2. performing exposure control processing so as to fix an exposure control state to the optimum exposure control state by using the control

parameters regardless of a selecting operation by said zone selecting means.

Therefore, the invention as recited in claim 1 is significantly different from Mimura. Applicants thus believe claim 1 to be in condition for allowance, and accordingly, claim 2 as well as it depends from claim 1.

With regard to claim 3, rejected under §103 as being unpatentable over Mimura in view of Iwasaki, and further to the foregoing discussion of Mimura, Applicants submit that Iwasaki is directed to a visual axis detecting device 110 which detects a visual axis of a photographer, and a tracking device 155 which tracks a position which is near the position of object detected by device 110 and has approximate spectral characteristics. The exposure and focus are controlled by the tracking process. Iwasaki thus detects and keeps track of an object in the finder.

However, Iwasaki discloses, teaches or suggests neither to store the optimized exposure control parameters for a selected zone nor to fix the optimum exposure state based upon the stored control parameters.

Therefore, Applicants believe claim 3 to be patentable over Mimura and Iwasaki, taken alone or in combination. Claims 4 and 5, depending from claim 3, are similarly believed to be in condition for allowance.

Claims 6-8 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Mimura in view of Iwasaki and further in view of Shimizu.

As Applicants argued in the previous response, Shimizu is directed to correcting a brightness-attenuating characteristic of the zoom lens responsive to the position of a zoom lens. Shimizu discloses, teaches or suggests neither to store the optimized exposure control parameters for a selected zone nor to fix the optimum exposure state based upon the stored control parameters. Mimura and Iwasaki are discussed above. Applicants respectfully submit that Mimura, Iwasaki and Shimizu are silent on at least the above identified claim-features (1) and (2).

Therefore, Applicants believe claim 6 to be patentable over Mimura, Iwasaki and Shimizu, taken alone or in combination. Accordingly, Applicants believe that claims 7 and 8, depending from claim 6, are also in condition for allowance.

The Examiner has rejected claims 9-15 under 35 U.S.C. §103(a) as being unpatentable over Mimura in view of Iwasaki and in view of Faltermeier and claim 16 under 35 U.S.C. §103(a) as being unpatentable over Mimura in view of Iwasaki and Faltermeier and further in view of Arai.

As Applicants argued in the previous response, Faltermeier is directed to a photomicroscope with a video camera and an exposure time control for a still camera which performs focus control by the auto-focus module 23 of the CCD camera 14, an exposure control

by the exposure control 26, and a selection of image area (area position and area size) for exposure metering by the track ball 27c of the control panel 27.

However, video images stored in the auto-focus module 23 are merely a previous result of a focus detection condition and used for comparing with incoming video images to detect the best focus condition. This is at least one of the differences between the claimed invention and the apparatus of Faltermeier. That is, data in the auto-focus module 23 is changing every moment. Therefore, data stored in the auto-focus module 23 is not the adjusting data relating to the prescribed state. Mimura and Iwasaki are discussed above. Mimura, Iwasaki and Faltermeier are silent on at least the claim features (1) and (2) identified above.

Therefore, claim 9 is believed patentable over Mimura, Iwasaki, Faltermeier and Arai, taken alone or in combination. Accordingly, Applicants believe that claims 10-16, depending therefrom, are also in condition for allowance.

CONCLUSION

Applicants respectfully submit that, as discussed in detail above, the references of record do not teach or suggest, either singularly or in combination, the features of the invention recited in the claims. The invention as claimed is believed patentably distinct from the cited references and not anticipated nor rendered obvious thereby. Therefore, Applicants believe that the claims as herein presented are allowable over the prior art of record.

PATENT Docket No. 1232-4252US2

AUTHORIZATION

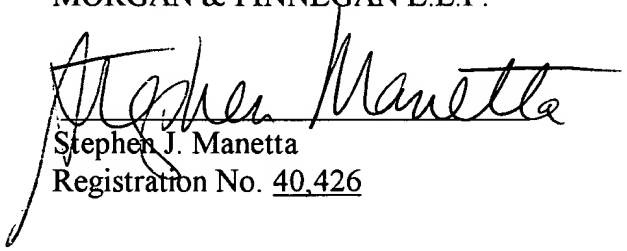
Applicant believes no fees are required for this Amendment. However, the Commissioner is hereby authorized to charge any additional fees which may be required for this amendment, or credit any overpayment to Deposit Account No. 13-4500, Order No. 1232-4252US2.

In the event that a telephone conference would facilitate prosecution of the instant application in an way, the Examiner is invited to contact the undersigned at the number provided.

An early and favorable examination on the merits is respectfully requested.

Respectfully submitted,
MORGAN & FINNEGAN L.L.P.

Dated: March 12, 2001

By: 
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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claims 1, 3, 6 and 9 have been amended as follows:

1. (Four times amended) An image sensing apparatus having image sensing means for sensing a subject image formed on an image sensing plane and outputting an image signal corresponding to the subject image, comprising:

zone selecting means for selecting any zone on the image sensing plane in a state that said image sensing means is sensing the subject image;

exposure detection means for detecting an exposure condition on the basis of an image signal in a selected zone;

exposure control means for controlling exposure based upon the detected exposure condition;

memory means for storing control parameters outputted by said exposure control means, the memory means configured to store the control parameters when an exposure control processing by said exposure control means is completed and an optimum exposure control state is obtained; and

control means for, regardless of a selecting operation by said zone selecting means, controlling said exposure control means to fix an exposure control state to the optimum exposure control state by using the control parameters stored in said memory means.

3. (Four times amended) An image sensing apparatus having image sensing means for sensing a subject image formed on an image sensing plane and outputting an image signal

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corresponding to the subject image, comprising:

zone selecting means for selecting any zone on the image sensing plane in a state that said image sensing means is sensing the subject image;

exposure detection means for detecting an exposure condition on the basis of the image signal in a selected zone;

exposure control means for controlling an exposure based upon the detected exposure condition;

memory means for storing control parameters outputted by said exposure control means, the memory means configured to store the control parameters when an exposure control processing by said exposure control means is completed and an optimum exposure control state is obtained;

control means for, regardless of a selecting operation by said zone selecting means, controlling said exposure control means to fix an exposure control state to the optimum exposure control state by using the control parameters stored in said memory means; and

selected-zone detection means for determining whether the image signal captured by said image sensing means contains said zone upon elapse of a prescribed period of time, and outputting a signal for resetting control parameters in said memory means if the captured image signal is not contained in said zone.

6. (Four times amended) An image sensing apparatus having image sensing means for sensing a subject image formed on an image sensing plane and outputting an image signal corresponding to the subject image, comprising:

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zone selecting means for selecting any zone on the image sensing plane in a state that said image sensing means is sensing the subject image;

exposure detection means for detecting an exposure condition relating to the image signal in a selected zone on the basis of the image signal;

exposure control means for controlling an exposure based upon the detected exposure condition;

first memory means for storing control parameters outputted by said exposure control means, the memory means configured to store the control parameters when an exposure control processing by said exposure control means is completed and an optimum exposure control state is obtained;

control means for, regardless of a selecting operation by said zone selecting means, controlling said exposure control means to fix an exposure control state to the optimum exposure control state by using the control parameters stored in said first memory means;

second memory means for storing a video signal of said zone; and

detection means for determining whether a zoomed image signal captured by said image sensing means contains the video signal of said zone stored in said second memory means, and outputting a signal for resetting the control parameters in said first memory means if the captured image signal is not contained in said zone.

9. (Four times amended) An image sensing apparatus having display means for displaying an image signal, comprising:

a pointing device for selecting any zone in a screen displayed by said display means

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in a state that said image sensing means is sensing the subject image;

adjusting means for applying a prescribed adjustment to the image signal of said zone;

memory means for storing adjusting data outputted by said adjusting means; and

control means for storing the adjusting data in said memory means, the memory means configured to store the adjusting data when adjustment by said adjusting means is completed and a prescribed state is obtained, and for controlling said adjusting means to fix an exposure control state to the prescribed state by using the adjusting data stored in said memory means, regardless of a selecting operation by said zone selecting means.